CLAIMS

What is claimed is:

1. A shock absorbing support system comprising:

lower supporting members that support the shock absorbing system that support a instrument;

instrument frame for tightly fits of said instrument;

upper framing members for damping vibrations transmitted to said instrument frame;

said upper members having first connection assembly means for being vertically supported to bottom frame of said instrument and second connection assembly means for being horizontally connected to the upper frame of said instrument in at least two directions;

said lower supporting members comprising steel or aluminum members that connect said shock absorbing system to a structure that has dynamic vibration source;

said instrument frame comprising rigid connection points to said instrument with or without frame members that surrounding said instrument.

2. The first connection assembly of claim 1 further including:

Spring assembly with damper assembly vertically standing side by side connecting bottom of said instrument frame and said lower supporting members.

3. The second connection assembly of claim 1 wherein horizontally damper assembly includes means for being pivotally connected to said instrument frame and said upper framing members.

4. The spring assembly of claim 2 further including a coil spring with said coil spring being restrained with an inner steel rod inside said coil spring. One end of said steel rod is

rigid connected to said lower supporting members and one end has thread for nut. Said steel rod with said thread goes through a hole in a steel plate. Said steel plate is rigid connected to said instrument frame. The size of said hole in said steel plate is large enough to let said steel rod free move horizontally, but smaller than the size of said nut. Said nut would lock said steel rod through said thread of said steel rod above said steel plate within certain distance. Therefore, said steel rod can freely move vertically and horizontally within the dynamic move limits.

5. The damper assembly of claim 2 & 3 further including a damper and two damper mounting assemblies at each end of said damper. Said damper mounting assembly comprises a u-shape seat, two shim plates, and a pin assembly, said u-shape seat defining a bearing plate rigid connected to two vertical plates with hole that forms a u-shape, said pin assembly defining two retaining rings and a pin with two recess at each end of said pin.4 One end of said damper being press fit between said vertical plates and said shim plates and said pin connects one end of said damper through holes of said vertical plates, holes of said shim plates, and hole at the end of said damper. Said two retaining rings clamp into said recesses for retaining ring.